

REMARKS

Claims 8-30 and 37-48 have been canceled without prejudice. Applicants reserve the right to pursue claims similar or identical to claims 8-30 and 37-48 in one or more divisional applications claiming priority to the instant application.

Although it is believed that the term "atom" in original claims 2 and 3 would be understood by those of ordinary skill in the art to refer to the atoms of the structure of claim 1, claims 2 and 3 have nonetheless been amended to clarify this fact. It is believed that this amendment only makes explicit what was inherently disclosed, and thus, this amendment does not alter the scope of claims 2 or 3.

Although it is believed that one of ordinary skill in the art would understand that R¹ and R² in original claim 31 each inherently includes an atom, claim 31 has nonetheless been amended to clarify this. It is believed that this amendment only makes explicit what was inherently disclosed in the claim, and thus, this amendment does not alter the scope of claim 31.

Claim 34 has been amended to correct an inadvertent typographical error. The term "compound" in the last line of the claim has been amended to "composition."

No new matter has been added by any of these amendments. Claims 1-7 and 31-36 are now pending for examination.

Rejection of claims 1-7 and 31-36 under 35 U.S.C. §112, ¶2

Reconsideration is requested of the rejection of claims 1-7 and 31-36 under 35 U.S.C. §112 ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

In the Office Action, claim 1 has been rejected for having a "dangling valence." It is unclear to the Applicants what is being rejected in claim 1. Applicants believe that the valences in the structure of claim 1 are fully satisfied. Applicants respectfully request clarification or withdrawal of this rejection. If, in the rejection, the Examiner objects to the presentation of a structure having a functional group having negative charge, without recitation of a balancing positive ion or other species, then the rejection is believed to be improper because the claim is open-ended (reciting "comprising"), and those of ordinary skill in the art would readily recognize

that compositions having negatively-charged functional groups exist, and can be balanced by positively-charged ions or groups of wide variety.

Claims 1-3 have been rejected as having been misrepresented as composition claims. Applicants are unclear as to the nature of this rejection. Applicants note that a claim that recites a "composition, comprising a structure" is an open-ended claim, i.e., the composition includes at least the structure recited in the claim, but the composition can also include other components, for example, a carrier as suggested by the Examiner. It is noted that the Applicants intend the "composition" of claim 1 (and other claims) to include only the claimed compound, in one embodiment, and in other embodiments the claimed compound and other compounds. It is believed that "composition" is an appropriate term for any of these embodiments, especially as a "composition of matter" is one of the statutory classes of claims. Thus, Applicants believe that claims 1-3 are definite as written. Applicants therefore respectfully request clarification or the withdrawal of the rejection of claims 1-3.

Claim 3 has been rejected for reciting "on a base," where the phrase "on a base" asserts that there is more than one base present, according to the Office Action. Applicants believe that the claim is definite as shown, i.e., the claim recites that the structure has a base. Such a claim is not necessarily indefinite, as one of ordinary skill in the art can determine that the structure includes a base. Nevertheless, solely to expedite prosecution, and without altering the scope of the claim, Applicants have amended claim 3 as requested by the Examiner.

The term "electron-rich" in claim 3 is considered indefinite in the Office Action as being a relative term. Applicants note that "electron rich" is a term of art and, further, is specifically defined in the specification. For example, on page 11, electron-rich groups include hydroxides, halogens, alkyls, amino groups, alkylamino groups, and dialkylamino groups. Thus, it is believed that those of ordinary skill in the art would understand the scope of claim 3. Withdrawal of the rejection of claim 3 is therefore respectfully requested.

Claim 4 has been rejected as being drawn to a method of producing a composition, rather than a compound. Claim 4 was also rejected in the Office Action as being indefinite for using the term "species." Regarding the method of producing a composition, Applicants note that this issue has been addressed above with respect to claims 1-3. It is believed that this method

includes a reaction that produces the structure shown in claim 4, but can include other steps and chemicals as well.

With respect to "species," it is believed that those of ordinary skill in the art would understand that a species, in the context of the present application, refers to chemical species and not biological organisms (although the compositions of the invention are not necessarily precluded from use in biological organisms). Thus, Applicants believe that those of ordinary skill in the art would understand the scope of claim 4. Withdrawal of the rejection of claim 4 is therefore respectfully requested.

Claims 6 and 7 have been rejected in the Office Action as being indefinite for reciting a "derivative." Applicants believe that those of ordinary skill in the art would understand the meaning of "derivative." Applicants note that the Patent Office regularly issues patents including claims reciting "derivatives." A quick search of the Patent Office web site revealed over 20,000 patents with claims reciting derivatives, for example, U.S. Patent No. 6,656,983. Thus, withdrawal of the rejection of claims 6 and 7 is respectfully requested.

Claim 31 is considered in the Office Action as being indefinite for reciting reaction of the NH_2 group of a composition having a defined structure with a compound to form an amine of defined structure. The Office Action appears to call for more details of the synthesis. This appears to be a request for a narrowing of the claim without basis, i.e., a prior art citation, and is believed to be improper.

Claims 31, 32, and 33 have each been rejected as being indefinite, since R^1 and R^2 are not both defined. Applicants respectfully disagree. It is believed that one of ordinary skill in the art would understand that R^1 and R^2 in original claim 31 each inherently includes an atom. Nevertheless, solely to expedite prosecution, and without altering the scope of the claim, Applicants have amended claim 31 as requested by the Examiner. It is to be understood that this amendment in no way narrows the scope of claim 31, as each of R^1 and R^2 inherently, prior to the amendment, comprised at least an atom. Claims 32 and 33 depend from claim 31, and it is believed that the amendment of claim 31 addresses claims 32 and 33 as well. Thus, the withdrawal of the rejection of claims 31-33 is respectfully requested.

Claim 34 has been rejected for reciting the limitation "the compound" in line 14 of page 27, i.e., within the body of the claim. Applicants have amended claim 34 to recite a composition. Thus, withdrawal of the rejection of claim 34 is respectfully requested.

Rejection of claim 1 under 35 U.S.C. §102(b)

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Bahl, *et al.*, U.S. Patent No. 5,215,882. The Office Action states that Bahl discloses 5-amino-2'-deoxyuridine-5'-triphosphate, and that the "(12)" in "5-amino(12)-2'-deoxyuridine-5'-triphosphate" is a typographical error.

It would appear that the Patent Office would need to provide evidence of this typographical error for a proper rejection to be made. There appears to be no evidence of any inherency which would be necessary in order to present a proper §102 rejection, where specific disclosure of the claimed invention is not found in a reference.

Moreover, Applicants respectfully disagree with the Patent Office's assertion of Bahl. It is believed that the term "(12)" represents a linker, and was intended to be a linking agent. Other examples of this compound are found in the public domain, for example, the paper enclosed with and IDS filed with response (Kumar, *Anal. Biochem.* **169** 376-382, 1988), which discloses 5-amino(12)-2'-deoxyuridine-5'-triphosphate. Thus, Applicants believe that Bahl is correct as issued, and "5-amino(12)-2'-deoxyuridine-5'-triphosphate" is not a typographical error. Consequently, Bahl does not disclose the structure of claim 1. It is thus respectfully requested that the rejection of claim 1 be withdrawn.

Rejections of claims 1 and 4-6 under 35 U.S.C. §102(b)

Claims 1 and 4-6 have been rejected under 35 U.S.C. §102(b) as being anticipated by Engelhardt, *et al.*, U.S. Patent No. 5,241,060 ("Engelhardt").

With respect to claim 1, it is not seen where in Engelhardt is 5-amino-2'-deoxyuridine phosphate suggested or disclosed. The Office Action points to several examples that recite various nucleosides, but does not point to a 5-amino-2'-deoxyuridine phosphate structure in Engelhardt. Consequently, it is respectfully requested that the rejection of claim 1 under 35 U.S.C. §102(b) be withdrawn.

With respect to claims 4-6, the Office Action does not indicate where, in Engelhardt, a method comprising providing a species comprising a nucleoside, and reacting this species with a compound to form a composition comprising a 5-amino-2'-deoxyuridine phosphate structure is specifically suggested or disclosed. The Office Action points to several examples discussing various nucleosides, but does not indicate where, in Engelhardt, is the method of claim 4 disclosed. For instance, Example XV of Engelhardt describes a biotinylated 5-amino-2'-deoxyuridine. Examples XVIII and XIX describe phosphorylation of a 5-substituted pyrimidine nucleoside, and preparation of 5-substituted pyrimidine triphosphates from 5' monophosphates, respectively, but these examples do not show, expressly or inherently, that the 5-substituted pyrimidine nucleoside must be 5-amino-2'-deoxyuridine. Applicants note that an inherent disclosure requires that the limitation considered to be inherent must necessarily be present in the disclosure, i.e., far more than just a possibility.

Consequently, it is respectfully requested that the rejection of claim 4 be withdrawn. Claims 5 and 6 depend from claim 4, and it is respectfully requested that the rejection of these claims be withdrawn as well for at least these reasons.

Rejection of claims 1-3 and 34-36 under 35 U.S.C. §103(a)

Claims 1-3 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Engelhardt.

With respect to claim 1, the Patent Office points to Examples XV, XVIII, and XIX as forming the basis of the rejection under 35 U.S.C. §103(a). However, the Office Action does not point to a teaching, suggestion, or motivation within Engelhardt to combine these examples, nor does the Office Action show a teaching, suggestion, or motivation for a 5-amino-2'-deoxyuridine phosphate structure. Instead, Engelhardt is directed to the synthesis of nucleosides that are labeled, e.g., with biotin; thus, it is not seen why one of ordinary skill in the art would be motivated to combine the examples to produce the structure claimed in claim 1. It is therefore respectfully requested that the rejection of claim 1 be withdrawn. Claims 2 and 3 depend on claim 1, and it respectfully requested that the rejection of these claims also be withdrawn for at least these reasons.

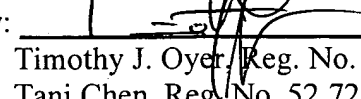
Claim 34 recites providing a composition comprising a 5-amino-2'-deoxyuridine phosphate structure as shown in the claim, and coupling a reporting group to the composition. It is not seen where in Engelhardt is a 5-amino-2'-deoxyuridine phosphate taught, suggested, or motivated, as previously discussed with reference to claim 1. Thus, it is respectfully requested that the rejection of claim 34 be withdrawn. Claims 35 and 36 depend from 34, and it is respectfully requested that the rejection of these claims be withdrawn as well for at least these reasons.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representatives at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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